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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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PHOENIX TECHNOLOGIES LTD.
915 MURPHY RANCH ROAD
MILPITAS, CA 95035

EXAMINER

FOWLKES, ANDRE R

ART UNIT	PAPER NUMBER
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2122

DATE MAILED: 10/05/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/976,993

Applicant(s)

BRAMLEY, RICHARD A.

Examiner

Andre R. Fowlkes

Art Unit

2122

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 April 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 October 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 1/23/03
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

1. Claims 1-23 are pending.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

3. Claims 1-4 and 13-16 are rejected under 35 U.S.C. 102(e) as being anticipated by Marisetty et al., (Marisetty), U.S. Patent No. 6,754,828.

As per claim 1, Marisetty discloses an **apparatus for updating a firmware**, (col. 1:43-45, "A novel processor architecture and algorithms are provided which improve non-volatile memory binary code (i.e. firmware) updates"), **comprising:**

- **a first firmware storage device to store the firmware** (col. 1:13-14, "the boot code (i.e. firmware) that is contained in the non-volatile read only memory (ROM)"),

- **a computing unit to perform an update process, a program used by the computing unit to perform the update process** (col. 1:43-45, "A novel processor architecture and algorithms are provided which improve non-volatile memory binary code (i.e. firmware) updates"),

- **a second firmware storage device to temporarily store at least a portion of the firmware received from the first firmware storage device** (col. 2:55-57, "The non-volatile memory includes a FLASH memory, an electrically erasable and programmable read only memory (EEPROM), or any other suitable non-volatile memory"),

wherein the computer unit utilizes the program to:

a) read out at least a portion of the firmware from the first firmware storage device to the second firmware storage device (col. 2:63-65, "(There are) different components of the firmware, each of which can come from (i.e. be read out from) different sources or owners to be finally merged together as a firmware"),

b) update the firmware by adding the firmware update to the portion of the firmware contained in the second firmware storage device so as to modify the firmware (col. 2:63-65, "(There are) different components of the firmware, each of which can come from (i.e. be read out from) different sources or owners to be finally merged together as a (modified) firmware (update)"),

c) write the modified firmware from the second firmware storage device back into the first storage device. (col. 2:63-65, "(There are) different components of the firmware, each of which can come from (i.e. be read out from) different sources or owners to be finally merged together as a (modified) firmware (update and is written to the first storage drive)").

As per claim 2, the rejection of claim 1 is incorporated and further, Marisetty discloses that **the first firmware storage device comprises a writeable non-volatile memory** (col. 1:13-14, "the boot code (i.e. firmware) that is contained in the non-volatile read only memory (ROM)").

As per claim 3, the rejection of claim 1 is incorporated and further, Marisetty discloses that **the second firmware storage device comprises at least one of a hard disk, a floppy disk, a random access memory, a magnetic tape, a magnetic storage device, and an optical disk** (Fig. 1, item 104, "disk drive", and associated text, e.g. col. 2:23-43).

As per claim 4, the rejection of claim 1 is incorporated and further, Marisetty discloses that **the computing unit comprises at least one of a microprocessor, a digital signal processor, a distributed processor network, a processor connected through the Internet** (Fig. 1, item 100, and associated text, e.g. col. 2:23-43).

As per claim 13, this is a method version of the claimed apparatus discussed above, in claim 1, wherein all claimed limitations have also been addressed and/or cited as set forth above. For example, see Marisetty's algorithm for non-volatile memory updates (col. 1:43-64).

As per claim 14, the rejection of claim 13 is incorporated and further, Marisetty discloses that merging at least a portion of the first firmware with a second firmware to form an updated firmware comprises: **locating a final element of code within the first firmware, storing a portion of the second firmware within the first of firmware to form an updated firmware** (col. 3:15-17, "(the system) allows the flexibility of positioning a firmware component at any convenient place in the non-volatile memory").

As per claim 15, the rejection of claim 13 is incorporated and further, Marisetty discloses that **locating a feature table within the firmware, wherein said feature table lists the addresses and functions of code within the firmware, adding an address and function corresponding to at least one feature from the second firmware to the function table** (col. 3:4-7, "The FIT (firmware interface table, i.e. a feature table) provides information about each firmware component in the non-volatile memory, such as location of the component within the non-volatile memory, length of the component, checksum, version number, etc.").

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As per claim 16, the rejection of claim 15 is incorporated and further, Marisetty discloses that **the first firmware comprises a basic input/output system (BIOS)** (col. 1:49, "BIOS").

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 5-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Marisetty et al., (Marisetty), U.S. Patent No. 6,754,828 in view of Edelman, U.S. Patent Publication No. 2002/0029347.

As per claim 5, the rejection of claim 1 is incorporated, and further Marisetty doesn't explicitly disclose that **the modified firmware includes a portion that comprises code that determines if the feature has expired.**

However, Edelman, in an analogous environment, discloses that **the modified firmware includes a portion that comprises code that determines if the feature has expired** (¶. 35:1-2, "The license data may include a software license expiration date").

Therefore, it would have been obvious to a person of ordinary skill in the art, at the time the invention was made, to incorporate the teachings of Edelman into the system of Marisetty to have the **modified firmware include a portion that comprises code that determines if the feature has expired**. The modification would have been obvious because one of ordinary skill in the art would have wanted to prevent unauthorized access to the software. (Edelman, ¶ 2:1-3).

As per claim 6, the rejection of claim 5 is incorporated, and further Marisetty doesn't explicitly disclose that the code causes the computing unit to:

- **provide for a limited time availability for at least a portion of the updated firmware**
- **determine a present time**
- **determine the availability of at least a portion of the updated firmware by comparing the present time to the limited time availability**
- **terminate availability of at least a portion of the updated firmware when the present time is greater than the limited time availability .**

However, Edelman, in an analogous environment, discloses that the code causes the computing unit to:

- **provide for a limited time availability for at least a portion of the updated firmware (¶. 35:1-2, "The license data may include a software license expiration date").**
- **determine a present time (¶. 112:3, "system clock"),**

- determine the availability of at least a portion of the updated firmware by comparing the present time to the limited time availability (¶. 33:1-3, "The license data may include a licensing medium expiration date determined by a configurable time period during which the licensing medium is valid"),

- terminate availability of at least a portion of the updated firmware when the present time is greater than the limited time availability (¶. 36:5-7, "The license data is used to determine whether to allow access to the electronic data").

Therefore, it would have been obvious to a person of ordinary skill in the art, at the time the invention was made, to incorporate the teachings of Edelman into the system of Marisetty to have the code cause the computing unit to:

- provide for a limited time availability for at least a portion of the updated firmware

- determine a present time

- determine the availability of at least a portion of the updated firmware by comparing the present time to the limited time availability

- terminate availability of at least a portion of the updated firmware when the present time is greater than the limited time availability. The modification would have been obvious because one of ordinary skill in the art would have wanted to prevent unauthorized access to the software. (Edelman, ¶ 2:1-3).

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As per claim 7, the rejection of claim 6 is incorporated, and further Marisetty doesn't explicitly disclose that determining of the availability of at least a portion of the updated firmware by comparing the present time to the limited time ability comprises:

- reading the present time from a clock from a predetermined source;**
- comparing the present time to the limited time availability expressed as a real time.**

However, Edelman, in an analogous environment, discloses that determining of the availability of at least a portion of the updated firmware by comparing the present time to the limited time ability comprises:

- reading the present time from a clock from a predetermined source (¶. 33:1-3, "The license data may include a licensing medium expiration date (i.e. time) determined by a configurable time period during which the licensing medium is valid"),**
- comparing the present time to the limited time availability expressed as a real time (¶. 33:1-3, "The license data may include a licensing medium expiration date (i.e. real time) determined by a configurable time period during which the licensing medium is valid"),**

Therefore, it would have been obvious to a person of ordinary skill in the art, at the time the invention was made, to incorporate the teachings of Edelman into the system of Marisetty to have determining of the availability of at least a portion of the updated firmware by comparing the present time to the limited time ability comprises:

- reading the present time from a clock from a predetermined source;**

- **comparing the present time to the limited time availability expressed as a real time.** The modification would have been obvious because one of ordinary skill in the art would have wanted to prevent unauthorized access to the software. (Edelman, ¶ 2:1-3).

As per claim 8, the rejection of claim 7 is incorporated, and further Marisetty doesn't explicitly disclose that **the predetermined source is a real time source**.

However, Edelman, in an analogous environment, discloses that **the predetermined source is a real time source** (¶. 33:1-3, "The license data may include a licensing medium expiration date determined by a configurable time period (i.e. predetermined real time source) during which the licensing medium is valid").

Therefore, it would have been obvious to a person of ordinary skill in the art, at the time the invention was made, to incorporate the teachings of Edelman into the system of Marisetty to have a **the predetermined source is a real time source**. The modification would have been obvious because one of ordinary skill in the art would have wanted to prevent unauthorized access to the software. (Edelman, ¶ 2:1-3).

As per claim 9, the rejection of claim 7 is incorporated, and further Marisetty doesn't explicitly disclose that **the predetermined source is an internet time source**.

However, Edelman, in an analogous environment, discloses that **the predetermined source is an internet time source** (¶. 67:9-11, "The client program may communicate with ... (an) Internet (time source)").

Therefore, it would have been obvious to a person of ordinary skill in the art, at the time the invention was made, to incorporate the teachings of Edelman into the system of Marisetty to have the **predetermined source is an internet time source**. The modification would have been obvious because one of ordinary skill in the art would have wanted to prevent unauthorized access to the software. (Edelman, ¶ 2:1-3).

As per claim 10; the rejection of claim 6 is incorporated, and further Marisetty doesn't explicitly disclose determining of the availability of at least a portion of the updated firmware by comparing the present time to the limited time ability comprises:

- **reading the present time from an elapsed time counter;**
- **comparing the present time to the limited time availability expressed as a total elapsed time.**

However, Edelman, in an analogous environment, discloses that determining of the availability of at least a portion of the updated firmware by comparing the present time to the limited time ability comprises:

- **reading the present time from an elapsed time counter** (¶. 33:1-3, "The license data may include a licensing medium expiration date determined by a configurable time period (i.e. an elapsed time counter) during which the licensing medium is valid"),
- **comparing the present time to the limited time availability expressed as a total elapsed time** (¶. 33:1-3, "The license data may include a licensing medium

expiration date determined by a configurable time period (i.e. comparing the present time to the total elapsed time) during which the licensing medium is valid”).

Therefore, it would have been obvious to a person of ordinary skill in the art, at the time the invention was made, to incorporate the teachings of Edelman into the system of Marisetty to have determining of the availability of at least a portion of the updated firmware by comparing the present time to the limited time ability comprise:

- **reading the present time from an elapsed time counter;**
- **comparing the present time to the limited time availability expressed as a total elapsed time.**

The modification would have been obvious because one of ordinary skill in the art would have wanted to prevent unauthorized access to the software (Edelman, ¶ 2:1-3).

As per claim 11, the rejection of claim 6 is incorporated, and further Marisetty doesn't explicitly disclose that determining of the availability of at least a portion of the updated firmware by comparing the present time to the limited time ability further comprises:

- **reading the present time from a number of uses counter which counts the number of times a portion of the firmware is used;**
- **comparing the present time to the limited time availability expressed as a total number of uses**

However, Edelman, in an analogous environment, discloses that determining of the availability of at least a portion of the updated firmware by comparing the present time to the limited time ability further comprises:

- **reading the present time from a number of uses counter which counts the number of times a portion of the firmware is used** (Claim 18:1-4, "the license data comprises a sequence number that allows the registration authority (to count the) number of times that (software has been accessed)"),

- **comparing the present time to the limited time availability expressed as a total number of uses** (Claim 18:1-4, "the license data comprises a sequence number that allows the registration authority (to count the) number of times that (software has been accessed)", and ¶. 33:1-3, "The license data may include a licensing medium expiration date determined by a configurable time period (i.e. comparing the present time to the total number of uses) during which the licensing medium is valid")

Therefore, it would have been obvious to a person of ordinary skill in the art, at the time the invention was made, to incorporate the teachings of Edelman into the system of Marisetty to have a determining of the availability of at least a portion of the updated firmware by comparing the present time to the limited time ability further comprises:

- **reading the present time from a number of uses counter which counts the number of times a portion of the firmware is used;**

- **comparing the present time to the limited time availability expressed as a total number of uses.**

The modification would have been obvious because one of ordinary skill in the art would have wanted to prevent unauthorized access to the software (Edelman, ¶ 2:1-3).

As per claim 12, the rejection of claim 6 is incorporated, and further Marisetty doesn't explicitly disclose determining of the availability of at least a portion of the updated firmware by comparing the present time to the limited time ability further comprises:

- **reading the present time from a counter which counts the number of times that a system containing the firmware has been booted since the firmware was updated;**

- **comparing the present time to the limited time availability expressed as a total number of times that the system has booted since the firmware was updated.**

However, Edelman, in an analogous environment, discloses that determining of the availability of at least a portion of the updated firmware by comparing the present time to the limited time ability further comprises:

- **reading the present time from a counter which counts the number of times that a system containing the firmware has been booted since the firmware was updated** (Claim 18:1-4, "the license data comprises a sequence number that allows the registration authority (to count the) number of times that (boot software has been accessed"),

- comparing the present time to the limited time availability expressed as a total number of times that the system has booted since the firmware was updated (Claim 18:1-4, "the license data comprises a sequence number that allows the registration authority (to count the) number of times that (boot software has been accessed)", and ¶. 33:1-3, "The license data may include a licensing medium expiration date determined by a configurable time period (i.e. comparing the present time to the total number of uses of boot software) during which the licensing medium is valid")

Therefore, it would have been obvious to a person of ordinary skill in the art, at the time the invention was made, to incorporate the teachings of Edelman into the system of Marisetty to have determining of the availability of at least a portion of the updated firmware by comparing the present time to the limited time ability further comprises:

- reading the present time from a counter which counts the number of times that a system containing the firmware has been booted since the firmware was updated;

- comparing the present time to the limited time availability expressed as a total number of times that the system has booted since the firmware was updated. The modification would have been obvious because one of ordinary skill in the art would have wanted to prevent unauthorized access to the software (Edelman, ¶ 2:1-3).

6. Claims 17-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Marisetty et al., (Marisetty), U.S. Patent No. 6,754,828 in view of Edelman, U.S. Patent Publication No. 2002/0029347, as applied to claim 6 above, and further in view of Wadsworth et al., (Wadsworth), U.S. Patent No. 5,701,492.

As per claims 17, 18 and 20-23, this is a method version of the claimed apparatus discussed above, in claims 8 and 10-12, wherein all claimed limitations have also been addressed, as set forth above, except that Marisetty doesn't explicitly disclose the use of a **shadow RAM**.

However, Wadsworth, in an analogous environment, discloses the use of a **shadow RAM** (col. 11:64, "a shadow RAM (is used)").

Therefore, it would have been obvious to a person of ordinary skill in the art, at the time the invention was made, to incorporate the teachings of Wadsworth into the system of Marisetty and Edelman to use a **shadow RAM**. The modification would have been obvious because one of ordinary skill in the art would have wanted to use shadow RAM technology to allow the BIOS to operate faster.

As per claim 19, Marisetty doesn't explicitly disclose **decrypting the data corresponding to the new feature and timing information**.

However, Edelman, in an analogous environment, discloses **decrypting the data corresponding to the new feature and timing information** (Claim 10 line 2, "decrypting the license data message digest").

Therefore, it would have been obvious to a person of ordinary skill in the art, at the time the invention was made, to incorporate the teachings of Edelman into the system of Marisetty and Wadsworth to **decrypt the data corresponding to the new feature and timing information**. The modification would have been obvious because one of ordinary skill in the art would have wanted to prevent unauthorized access to the software (Edelman, ¶ 2:1-3).

Conclusion


7. After October 25, 2004, the examiner can be reached at new telephone number (571) 272-3697, and the examiner's supervisor, Tuan Q. Dam can be reached on (571) 272-3695.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andre R. Fowlkes whose telephone number is (703)305-8889. The examiner can normally be reached on Monday - Friday, 8:00am-4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tuan Q. Dam can be reached on (703)305-4552. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read 'Tuan Dam', with a long horizontal stroke extending to the right.

ARF

TUAN DAM
SUPERVISORY PATENT EXAMINER